CYCOLOY™ FR RESINS CY5025

REGION ASIA

DESCRIPTION

CYCOLOY CY5025 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) resin is a standard grade that can be injection molded. This non-chlorinated, non-brominated flame retardant PC/ABS has a UL V0 & 5VB flame rating. CYCOLOY CY5025 resin is a general purpose resin that is an excellent candidate for a wide variety of thin wall applications.

TYPICAL PROPERTY VALUES

Revision 20191009

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield	59	MPa	SABIC - Japan Method
Tensile Stress, yld, Type I, 50 mm/min	56	MPa	ASTM D 638
Tensile Strain, break	79	%	SABIC - Japan Method
Tensile Strain, brk, Type I, 50 mm/min	99	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	89	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2570	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Strain, break, 50 mm/min	99	%	ISO 527
Flexural Stress, yield, 2 mm/min	96	MPa	ISO 178
Flexural Modulus, 2 mm/min	2880	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	450	J/m	ASTM D 256
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	11	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	72	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.7E-05	1/°C	ASTM E 831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	83	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	74	°C	ISO 75/Af
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
PHYSICAL			
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 1.5-3.2 mm	0.23	%	SABIC method
Mold Shrinkage, xflow, 1.5-3.2 mm	0.31	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	27	g/10 min	ASTM D 1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.29	%	ISO 62
ELECTRICAL			
Surface Resistivity	1.E+15	Ohm	ASTM D 257
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Compliant, 94V-1 Flame Class Rating	1	mm	UL 94 by SABIC-IP
UL Compliant, 94V-0 Flame Class Rating	1.2	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VB Rating	1.5	mm	UL 94 by SABIC-IP
INJECTION MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	245 – 275	°C	
Nozzle Temperature	245 – 275	°C	
Front - Zone 3 Temperature	245 – 275	°C	
Middle - Zone 2 Temperature	220 – 265	°C	
Rear - Zone 1 Temperature	220 – 255	°C	
Mold Temperature	60 – 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	30 – 80	%	
Vent Depth	0.038 – 0.076	mm	

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